

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method for preparing submicron sized particles of an organic compound, the solubility of which is greater in a water-miscible first solvent than in a second solvent which is aqueous, the process comprising the steps of

(i) dissolving the organic compound in the water-miscible first solvent to form a solution, the first solvent being selected from the group consisting of N-methyl-2-pyrrolidinone, 2-pyrrolidone, dimethyl sulfoxide, dimethylacetamide, lactic acid, methanol, ethanol, isopropanol, 3-pentanol, n-propanol, glycerol, butylene glycol, ethylene glycol, propylene glycol, mono- and diacylated monoglycerides, dimethyl isosorbide, acetone, dimethylformamide, 1,4-dioxane, polyethylene glycol, polyethylene glycol esters, polyethylene glycol sorbitans, polyethylene glycol monoalkyl ethers, polypropylene glycol, polypropylene alginate, PPG-10 butanediol, PPG-10 methyl glucose ether, PPG-20 methyl glucose ether, PPG-15 stearyl ether, propylene glycol dicaprylate, propylene glycol dicaprinate, propylene glycol laurate;

(ii) mixing into the solution a first surface modifier selected from the group consisting of anionic surfactants, cationic surfactants and nonionic surfactants;

(iii) mixing into the second solvent a second surface modifier to define a second solution, the second surface modifier selected from the group consisting of: anionic surfactants, cationic surfactants and nonionic surfactants; and

(iv) mixing the first solution with the second solution with high energy agitation by homogenization, counter-current flow homogenization, or microfluidization to define a pre-suspension of non-spherical, crystalline particles having an average effective particle size of less than 2 μ m.

Claim 2 (original): The method of claim 1 further comprising the step of mixing into the second solution a phospholipid.

Claim 3 (original): The method of claim 2 wherein the phospholipid is selected from natural phospholipids and synthetic phospholipids.

Claim 4 (original): The method of claim 2 wherein the phospholipid is selected from the group consisting of phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, phosphatidylinositol, phosphatidylglycerol, phosphatidic acid, lysophospholipids, egg phospholipid and soybean phospholipid.

Claim 5 (previously presented): The method of claim 1 wherein the nonionic surfactant is selected from the group consisting of polyoxyethylene fatty alcohol ethers, sorbitan fatty acid esters, polyoxyethylene fatty acid esters, sorbitan esters, glycerol monostearate, polyethylene glycols, cetyl alcohol, cetostearyl alcohol, stearyl alcohol, poloxamers, polaxamines, methylcellulose, hydroxycellulose, hydroxy propylcellulose, hydroxy propylmethylcellulose, noncrystalline cellulose, polyvinyl alcohol, polyvinylpyrrolidone, glyceryl esters, and phospholipids.

Claim 6 (previously presented): The method of claim 1 wherein the anionic surfactant is selected from the group consisting of potassium laurate, triethanolamine stearate, sodium lauryl sulfate, sodium dodecylsulfate, alkyl polyoxyethylene sulfates, sodium alginate, dioctyl sodium sulfosuccinate, phosphatidyl glycerol, phosphatidyl inositol, phosphatidylserine, phosphatidic acid and their salts, sodium carboxymethylcellulose, bile acids and their salts and calcium carboxymethylcellulose.

Claim 7 (original): The method of claim 1 wherein the cationic surfactants are selected from the group consisting of quaternary ammonium compounds, benzalkonium chloride, cetyltrimethylammonium bromide, chitosans and lauryldimethylbenzylammonium chloride.

Claim 8 (original): The method of claim 1 wherein the first solvent is N-methyl-2-pyrrolidinone.

Claim 9 (original): The method of claim 8 wherein the first surface modifier is a copolymer of oxyethylene oxide and oxypropylene.

Claim 10 (original): The method of claim 9 wherein the copolymer of oxyethylene and oxypropylene is a block copolymer.

Claim 11 (original): The method of claim 1 further comprising the step of removing the solvent and excess surfactant from the presuspension to provide particles.

Claim 12 (original): The method of claim 11 solvent and surfactant removal step is accomplished by a method selected from the group of centrifugation, diafiltration, force-field fractionation, and high-pressure filtration.

Claim 13 (original): The method of claim 11 wherein the step of solvent and surfactant removal is followed by a step of adding to the particles a diluent to define a third solution.

Claim 14 (original): The method of claim 13 wherein the diluent is water.

Claim 15 (previously presented): The method of claim 14 wherein the diluent contains a third surface modifier.

Claims 16-17 (canceled).

Claim 18 (previously presented): The method of claim 15 wherein the third surface modifier is selected from the group consisting of: anionic surfactants, cationic surfactants, and non-ionic surfactants.

Claim 19 (previously presented): The method of claim 18 wherein the third surface modifier is a non-ionic surfactant and is selected from the group consisting of: polyoxyethylene fatty alcohol ethers, sorbitan fatty acid esters, polyoxyethylene fatty acid esters, sorbitan esters, glycerol monostearate, polyethylene glycols, polypropylene glycols, cetyl alcohol, cetostearyl alcohol, stearyl alcohol, poloxamers, polaxamines, methylcellulose, hydroxycellulose, hydroxy propylcellulose, hydroxy propylmethylcellulose, noncrystalline cellulose, polyvinyl alcohol, polyvinylpyrrolidone, glyceryl esters, and phospholipids.

Claim 20 (currently amended): The method of claim 18 wherein the third surface modifier is an anionic surfactant and is selected from the group consisting of: potassium laurate, triethanolamine stearate, sodium lauryl sulfate, sodium dodecylsulfate, alkyl polyoxyethylene sulfates, sodium alginate, dioctyl sodium sulfosuccinate, phosphatidyl glycerol, phosphatidyl

inositol, phosphatidylserine, phosphatidic acid and their salts, sodium carboxymethylcellulose, bile acids and their salts, and calcium carboxymethylcellulose.

Claim 21 (currently amended): The method of claim 18 wherein the third surface modifier is cationic surfactant ~~are~~ and is selected from the group consisting of quaternary ammonium compounds, benzalkonium chloride, cetyltrimethylammonium bromide, chitosans and lauryldimethylbenzylammonium chloride.